U. S. DEPARTMENT OF COMMERCE
Environmental Science Services Administration
in cooperation with
Cotten Economic Research and
Bureau of Business Research of
The University of Texas at Austin

CLIMATOGRAPHY OF THE UNITED STATES NO. 20-41

CLIMATOLOGICAL SUMMARY

STATION BROWNFIELD, TEXAS

LATITUDE 33° 11' N
LONGITUDE 102° 16' W
ELEV. (GROUND) 3290 ft.

MEANS AND EXTREMES FOR PERIOD 1954-1967

Month	Temperature (°F) Means: Daily maximum	Daily minimum	Monthly	Extremes: Record highest	Year	Record lowest	Year	** Mean degree days	Precipitation Totals (Inches): Mean	Greatest daily	Year	Snow, Sleet: Mean	Maximum monthly	Year	Greatest Depth	Year	Mean number of days: Precip. .10 inch or more	Temperatures Max.: 90° and above	32° and below	Temperatures Min.: 32° and below	0° and below	Month
(a)	14	14	14	14		14		12	14	14		14	14		12		12	12	12	12	12	
Jan	53.2	23.1	38.2	78	1967+	-8	1963	840	0.36	0.87	1958	1.6	8.5	1958	8	1958	1	0	2	28	1	Jan
Feb	57.9	26.8	42.4	87	1962	1	1960	649	0.46	1.40	1961	2.1	8.1	1961	3	1964	1	0	1	22	0	Feb
Mar	65.0	32.6	48.8	92	1967	8	1965+	501	0.58	0.88	1961	1.0	8.8	1958	6	1958	2	*	1	16	0	Mar
Apr	76.4	45.1	60.8	102	1965	26	1962	179	1.19	1.90	1954	0	T		T	1957	2	3	0	2	0	Apr
May	84.0	54.4	69.2	101	1962+	33	1954	42	2.14	4.12	1963	0	0		0		3	10	0	0	0	May
Jun	91.3	62.7	77.0	111	1960	47	1955	3	2.83	4.05	1967	0	0		0		5	20	0	0	0	Jun
Jul	93.5	65.7	79.6	107	1958	56	1964+	0	2.38	2.87	1958	0	0		0		4	25	0	0	0	Jul
Aug	92.0	63.5	77.8	106	1959	52	1966	2	1.66	2.60	1966	0	0		0		3	23	0	0	0	Aug
Sep	86.1	57.6	71.9	103	1965	39	1959	15	1.66	2.00	1965	0	0		0		4	12	0	0	0	Sep
Oct	76.6	46.2	61.4	97	1965	28	1957	153	1.98	2.49	1960	0	0		0		3	3	0	1	0	Oct
Nov	64.4	34.9	49.7	85	1963	4	1957	453	0.47	0.93	1958	0.5	4.8	1957	4	1957	2	0	0	11	0	Nov
Dec	55.8	27.5	41.7	82	1964	6	1954	726	0.36	0.71	1964	1.2	6.0	1960	3	1960	1	0	2	24	0	Dec
Year	74.7	45.0	59.9	111	Jun. 1960	-8	Jan. 1963	3163	16.07	4.12	May 1963	6.4	8.8	Mar. 1958	8	Jan. 1958	31	96	6	104	1	Year

(a) Average length of record, years.

T Trace, an amount too small to measure.

** Base 65°F

+ Also on earlier dates, months, or years.

* Less than one half.

THE CLIMATE OF BROWNFIELD, TEXAS

Brownfield, located on the South Plains, 40 miles southwest of Lubbock, is the county seat and commercial center of Terry County. Four U.S. Highways and one State Highway intersect at Brownfield. Industries include cotton gins, compresses, feed plants, farm chemicals, plastics, and burial vaults. Annual festivities include a July rodeo and an October harvest festival. Terry County is level prairie with a sandy section in the northwest part. It is among Texas' leading counties in cotton production and crop income. Over 90 percent of farm income is from crops, mostly cotton and grain sorghums. Approximately 115,000 acres are irrigated. Soybeans, wheat, watermelons, cattle and sheep are produced also. Minerals include oil, gas and sodium sulfate. County elevation varies from 3,100 to 3,600 feet.

Brownfield has a dry steppe climate with mild winters. It is characterized by rapid changes and extremes, both in temperature and precipitation. Mean annual total precipitation is 16.07 inches with 79 percent of this amount falling during the warm season May through October. Prevailing winds are southerly to southwesterly the year round, averaging about 14 miles per hour. Relative humidity is low compared to sections of Central and East Texas. Mean annual relative humidity is approximately 74 percent at 6:00 a.m., 45 percent at noon, and 40 percent at 6:00 p.m., Central Standard Time.

Winter: Surges of cold polar or arctic air masses are frequent. These cold fronts or "northers" as they are called, often are accompanied by strong gusty winds and pronounced drops in temperature. Cold spells are usually of short duration since a change to southwesterly winds brings a rapid rise in temperature. Minimum temperatures are almost always below freezing, but winter daily maxima average 56°F. Winter is a dry season. Precipitation most often falls as light snow or sleet. Because of drifting, moisture derived from the snowfall is often of little benefit to cropland.

Spring: Early spring is a continuation of the winter season. There is extreme variability in the day-to-day weather. Thunderstorm activity increases significantly in May as the invasions of Tropical Maritime air masses from the Gulf of Mexico become more frequent. March and April are the windiest months of the year.

Summer: This is a relatively wet season with thunderstorm activity continuing near its peak through June, then decreasing slightly in July and August. While temperature maxima may soar above 100°F occasionally, summer weather is normally quite pleasant. The relative humidity is very low on the hottest days. Nighttime minima are in the low sixties and blankets often are needed for comfortable sleeping. Evaporative-type home air-conditioners operate effectively because of the low humidity.

Fall: This is the most pleasant season of the year. Thundershower activity decreases significantly from the summer months. Monthly precipitation drops off rather abruptly in November as polar air masses become effective in closing off the supply of moisture from the Gulf of Mexico. Daytime temperatures are mild and nights are crisp and cool.

The growing season (freeze free period) averages 210 days. The average dates of the last occurrence of 32°F in the spring and the first occurrence of 32°F in the fall are April 8 and November 4, respectively. Damaging hailstorms may occur any time from spring planting time to fall harvest. However, these storms usually cover a small area. The most damaging hailstorms are associated with the severe thunderstorms in the late spring and early summer months.

Sunshine is abundant the year round, with infrequent cloudy weather occurring mostly during the winter and early spring months. Evaporation is high, as would be expected in this dry climate. Average annual lake evaporation is approximately 71 inches.

BROWNFIELD, TEXAS

Average Temperature (°F)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1954	42.6	50.5	49.5	64.5	64.3	77.3	81.3	79.1	74.3	63.3	50.5	42.8	61.7
1955	39.3	40.5	50.4	62.3	70.0	75.8	78.6	77.7	71.4	60.8	48.0	43.9	59.9
1956	40.5	38.2	51.5	58.1	72.4	80.2	79.9	77.1	72.9	62.9	46.5	44.4	60.4
1957	39.7	49.0	49.4	56.1	64.8	73.5	80.0	77.4	68.0	57.1	44.0	44.5	58.6
1958	36.0	40.6	41.7	55.5	67.9	77.8	80.7	77.6	71.9	59.4	50.5	41.0	58.4
1959	38.6	41.4	48.2	57.7	69.4	76.7	75.6	78.8	73.2	58.7	44.8	43.5	58.9
1960	38.4	38.4	45.6	62.7	68.9	79.8	77.6	77.9	73.0	62.9	51.3	37.0	59.5
1961	36.5	43.2	50.9	59.9	69.8	75.1	75.8	75.9	70.7	61.8	44.7	40.5	58.8
1962	33.7	48.9	46.5	59.9	74.0	76.2	80.2	79.4	72.6	64.1	52.5	43.5	61.0
1963	32.4	44.2	52.5	66.1	70.5	-	81.0	79.2	74.4	66.1	51.4	37.7	-
1964	39.7	37.3	48.8	61.1	71.3	77.0	81.2	79.7	71.8	60.8	51.2	42.4	60.2
1965	43.2	38.7	42.9	63.7	71.4	78.3	82.4	79.0	73.0	62.3	56.0	44.9	61.3
1966	33.5	39.0	-	58.2	67.4	76.5	81.9	74.7	70.6	58.5	53.7	39.0	-
1967	39.9	43.2	56.7	65.1	67.0	76.6	78.3	75.2	68.5	61.4	49.9	37.9	60.0

STATION HISTORY

Temperature and rainfall observations began at Brownfield in March 1914. The temperature observations were discontinued in September 1921. Until it was closed on November 30, 1954, the station was located within one-half mile of the Brownfield Post Office. On September 16, 1953, a new station was established at Radio Station KTFY, 2.1 mile east of the post office and designated Brownfield 2E. Equipment consists of a standard eight-inch rain gage, maximum and minimum thermometers and a cotton region shelter. Data are published monthly in CLIMATOLOGICAL DATA-TEXAS. The data in this summary are from Brownfield 2E, station index number 41-1128-01.

Weather Bureau State Climatologist
Environmental Science Services Administration
3600 Manor Road, Austin, Texas 78723
July 1968

BROWNFIELD, TEXAS

Total Precipitation (Inches)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1954	0	0	0	2.12	2.34	0.54	0.03	1.17	0.03	1.55	0.17	0.27	8.22
1955	0.95	0.04	0.11	0.10	1.63	1.35	3.18	0.26	1.82	6.20	0.05	T	15.69
1956	0	0.83	0	0.16	1.12	1.64	1.03	0.31	0.83	1.62	T	0.24	7.78
1957	0.12	0.97	0.45	1.38	3.05	4.92	2.55	2.30	2.44	4.52	1.59	0.02	24.31
1958	1.04	0.84	2.13	1.71	1.68	2.01	3.30	1.45	1.76	1.83	0.99	T	18.74
1959	0	0.08	0	1.50	2.00	2.95	4.25	0	0.87	2.19	0.10	0.89	14.83
1960	0.54	0.87	0.38	0.18	1.40	1.17	5.24	0.53	0.53	4.31	T	1.03	16.18
1961	0.55	1.57	2.11	0.04	0.73	3.52	2.43	0.19	0.28	0.16	1.71	T	13.29
1962	0.19	0.14	0.10	2.04	0.52	1.77	4.14	2.68	3.37	3.81	0.81	0.52	20.09
1963	0.17	0.45	0.65	0.68	8.41	2.53	2.84	1.59	0.41	0.39	0.61	0.10	18.83
1964	0.50	0.28	0.41	T	1.20	1.55	0.14	0.49	2.47	0	0.30	0.85	8.19
1965	0.03	0.27	0.03	0.89	3.48	3.59	T	3.04	4.56	0.49	T	0.73	17.11
1966	1.01	T	0.73	4.74	1.81	2.46	0.56	9.29	2.05	0.20	0.01	T	22.86
1967	0	0.03	0.95	1.14	0.65	9.61	3.57	T	1.77	0.43	0.25	0.41	18.81

T - Trace

Monthly Temperatures and Precipitation